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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,129	04/19/2004	Herbert D. Stroud JR.	3226/2	2315

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EXAMINER	
FELTON, MICHAEL J	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/827,129	STROUD ET AL.	
	Examiner	Art Unit	
	Michael J. Felton	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The term "substantial" in claim 2 is a relative term that renders the claim indefinite. The term "substantial" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Substantial crimp in no way indicates the extent of crimping the cellulose acetate fibers were exposed to upon their manufacture.

4. Claim 3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites the limitation "the crimp" and discloses a method for forming this crimp. However, "the crimp" refers to the crimp disclosed in claim 2, which is part of the starting material. Therefore, the process in claim 3 cannot form the crimp discussed in claim 2 because the crimp in claim 2 was formed in a feedstock used in this process. In other words, if claim 3 is true, claim 2 must be false.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Interfiber plasticizer bond separation due to shredding is not discussed in the specification. Instead, the specification discusses mechanical interfiber plasticizer bonding and shredding as separate methods for forming crimping. In addition, no method for affecting the mechanical interfiber plasticizer bonding is disclosed.

7. Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The process of converting 200-800 grams/meter^2 paper web into absorbent paper products is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See In re Mayhew, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). In addition, if this claim is dependent on claim 8, the paper will include sizing and fillers used in paper manufacturing, but not necessarily used in the manufacturing of feminine hygiene articles and diapers.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

> Determining the scope and contents of the prior art.
> Ascertaining the differences between the prior art and the claims at issue.
> Resolving the level of ordinary skill in the pertinent art.
> Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 5662773 to Frederick, et al. in view of US 5573640 to Frederick, et al. US 5662773 discloses the use of long cellulose acetate fibers, followed by mechanical shredding (col. 2, 40-53). The resulting short cellulose acetate fibers can then be pulped with cellulose and made into paper (col. 2, lines 54-57). Although US 5662773 does not disclose the final size of the cellulose acetate fibers, US 5573640 discloses using cellulose acetate shredded to lengths between 1/8 inch and ¾ inch (3.175 mm and 19.05), and preferably ¼ inch (6.35 mm). Both 5662773 and 5573640 disclose that shorter fibers are necessary to make cellulose acetate with compatible with papermaking processes. It would have

been obvious to one of ordinary skill in the art at the time of invention, to combine the shredding and papermaking methods of US 5662773 with the specific lengths of fiber described by US 5573640.

12. Claim 2, 3, 4, 5, 6, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5662773 to Frederick, et al. and US 5573640 to Frederick, et al., in view of 2090669 to Dreyfus et al.

13. Regarding applicant claim 2, Dreyfus discloses a method of imparting a crimp in cellulose acetate fibers. It is widely known in the art that crimping cellulose acetate is extremely common and that crimping would be used in making cigarette filter material. It would have been obvious to one of ordinary skill in the art at the time of invention that the waste cellulose acetate fiber would be crimped.

14. Regarding applicant claim 3, US 5662773 to Frederick, et al. discloses shredding cellulose acetate to make into paper using one or more mechanical shredders. Although Frederick, et al. do not discuss the impact of the shredder on the crimp of the cellulose acetate, it would have been obvious to one of ordinary skill in the art at the time of invention, that mechanical shredding would inherently impart a crimp onto the cellulose acetate.

15. Regarding applicant claim 4, US 5662773 to Frederick, et al. discloses the use of long cellulose acetate fibers, followed by mechanical shredding (col. 2, 40-53). The resulting short cellulose acetate fibers can then be pulped with cellulose and made into paper (col. 2, lines 54-57). Although Frederick, et al. do not disclose that the cellulose acetate and cellulose used to make the paper is pulped with water, pulping is widely employed in paper making and it would have been obvious to one of ordinary skill in the

art to combine the teaching of Frederick, et al. with the common knowledge that cellulose is pulped immediately before making paper.

16. Regarding applicant claim 5, US 5662773 to Frederick, et al. discloses, "repulping is preferably conducted in a high shear device. The paper industry uses several types of high shear repulping devices that could be used." It would have been obvious to one of ordinary skill in the art at the time of invention to use a high shear device in repulping.

17. Regarding applicant claim 6, US 5573640 to Frederick, et al. discloses that reduction in length of fibers is achieved through confrication or refining step of the process used to prepare the paper (col. 2, 58-60). It would have been obvious to one of ordinary skill in the art at the time of invention to confricate or refine the fibers during manufacture of the paper.

18. Regarding applicant claim 7, US 5662773 to Frederick, et al. discloses the use of long cellulose acetate fibers, followed by mechanical shredding (col. 2, 40-53). The resulting short cellulose acetate fibers can then be pulped with cellulose and made into paper (col. 2, lines 54-57). Although Frederick, et al. do not disclose adding sizing and fillers to the paper, it is notoriously well known to add these treatments and components during paper production. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to add sizing and fillers to paper during production.

19. Regarding applicant claim 8, US 5573640 to Frederick, et al. discloses that when adding cellulose acetate to cellulose to make paper, only 1-10% of cellulose acetate by weight can be added before significant linting occurs during the printing process. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to limit the amount of cellulose acetate to 10% or less.

20. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5662773 to Frederick, et al., US 5573640 to Frederick, et al., and US 2090669 to Dreyfus et al., in further view of US 5967149 to Tsugaya, et al. Tsugaya, et al. disclose making cigarette filter and filter tips of paper made of cellulose and cellulose acetate and indicate one embodiment a paper web with a weight of 30.5 grams/meter^2. Although Tsugaya et al. employ uncrimped cellulose acetate, it would have been obvious to one of ordinary skill in the art to combine the prior art disclosed in the above rejections with Tsugaya et al. It is also notoriously well know that cellulose acetate is used as a filter material for cigarettes and Tsugaya et al. illustrate that cellulose acetate can be combined with cellulose to form a paper for this purpose.

21. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5662773 to Frederick, et al., US 5573640 to Frederick, et al., and US 2090669 to Dreyfus et al., in further view of US 3617439 Chapman, Jr., and US 2774126 A to Secrist. Frederick, et al. disclose adding waste cellulose acetate to cellulose pulp for making paper but does not specifically point out making heavy paper or diapers from this paper. Chapman, Jr. discloses comminuting pulp sheets (paper) that have a basis weight of 200 lbs. Per ream of 500 sheets measuring 19 inches by 24 inches (~619 grams per meter^2)(col. 3, 52-59). Chapman, Jr. also discloses that, "While the present process and resultant products are primarily described in terms of wood fiber absorbent pads, it is specifically noted that the attendant benefits will accrue to comminution pulp sheets prepared from other cellulosic fibers or admixtures of other cellulosic fibers with wood fibers," (col. 2, 51-56). It is also known in the art to add cellulose acetate to absorbent products, such as taught in Secrist. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of invention to use cellulose and cellulose acetate together in a paper product used for diapers and other absorbent products.

22.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Felton whose telephone number is 571-272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ERIC HUG
PRIMARY EXAMINER

MJF